CHAPTER 5
RESOURCE PRESERVATION

INTRODUCTION

The citizens of Roanoke County have a strong desire to preserve the quality of the county's natural, scenic and historic resources. The county's natural features - including mountains, forests, productive soil, streams, fresh air and wildlife - serve to distinguish the greater Roanoke Valley as a uniquely attractive urban center.

Roanoke County citizens recognize that the beauty of the existing natural environment attracts not only businesses and residents to our community but also tourists and sports enthusiasts. County citizens believe that it is essential to maintain the high quality of Roanoke County's environment while accommodating the pressures for future growth and development.

OPEN SPACE

During the past twenty-five years, Roanoke County has experienced steady growth. From a population of 53,800 in 1970 that reflects the results of several annexations, the population grew 54 percent to 83,100 in 1995. Future population projections indicate that by the year 2010 the County population will be approximately 87,400.

This growth in population and the accompanying shift in demographics - such as an aging population - are changing the traditional rural landscape of the County. New residents require more housing, schools, shopping centers, office buildings, roads, water and sewer facilities and parks and recreational services. The rural landscape is gradually becoming urbanized as a result of this growth. What was once an orchard is now a residential subdivision or a shopping center. What was once a hardwood forest is now an office building or condominium.

Between 1982 and 1992 the number of farms in Roanoke County decreased 11 percent from 306 to 272. Acreage of farmland decreased 25.5 percent from 33,475 to 24,924 during that same time frame. The loss of orchard land was even more dramatic, decreasing over 44 percent from 459 acres in 1982 to 256 acres in 1992.

With this loss of rural and agricultural lands there is a loss of undeveloped land commonly referred to as open space. Although Roanoke County has a high-quality public park system, there are severe shortages of park land particularly in certain areas. In addition, the majority of park land in the County is devoted to active recreational uses such as ballfields.

Open space provides many functions necessary for a healthy and prosperous community. It protects our drinking water by providing ample undeveloped land for the recharge of underground aquifers. It offers safe habitat for rare and endangered species of plants and wildlife. Forested lands improve air quality by removing carbon dioxide and other pollutants

from the air and by releasing oxygen into the air. They also help prevent soil erosion by stabilizing the soil with the roots from trees and other vegetation. Buffers of trees beside streams can improve water quality by slowing stormwater runoff, allowing pollutants to filter out before being deposited into the water courses.

Open space, especially with the mountainous terrain in Roanoke County, provides residents a sense of relief or spatial definition. When you see the mountains off in the distance you have a perspective on where the urban/suburban space ends and the rural space begins. Open space can also link residential communities via greenways and provide buffers between adjacent land uses. It provides recreational, educational, and cultural opportunities for residents, of all ages.

An ad-hoc advisory committee with representatives from the planning departments of the Roanoke Valley's four local governments and the Fifth Planning District Commission has been working on a regional open space plan. To date, the study includes an inventory of open space resources. The next step is to obtain citizen input on priority resources and to examine the alternatives for preserving, protecting and managing open space resources.

In preparing the inventory of resources for the open space plan, different types of land or resources have been identified and mapped. Five categories of open space have been analyzed: public open space, semi-public open space, private open space, agricultural/forestal parcels and lands under a conservation easement. Lands with unique natural resource characteristics have also been mapped. These include greenway corridors, lands in the 100-year floodplain, mountain elevations at a specified elevation, threatened and endangered species areas and scenic views from the Blue Ridge Parkway. Scenic views from the Appalachian Trail - a National Scenic Trail - may be included as this information becomes available.

GREENWAYS

A greenway is a corridor of protected open space managed for conservation, recreation and nonmotorized transportation. Greenways often follow natural geographic features such as ridge lines, stream valleys and rivers, but may also be built along canals, utility corridors or abandoned rail lines. Most greenways include a trail or bike path, but others may be designed strictly for environmental or scenic protection.

Greenways, as vegetated linear parks, provide tree cover, wildlife habitat, and riparian buffers to protect streams. The environmental benefits include reduced storm water runoff, flood reduction, water quality protection, and preservation of biological diversity. The trails within the greenways provide access between neighborhoods and destination points, opportunity to travel without an automobile, outdoor education classrooms, and close-to-home paths for walking, jogging, bicycling and roller blading. Tree cover and use of bicycles instead of cars provide for better air quality, fewer hard-surfaced parking lots and reduced energy costs. Although greenways are a collateral component of a county-wide park system they do not replace the need for additional park land.

In the spring of 1995, the four local governments appointed representatives to a Greenways Steering Committee, which was provided staff support by the Fifth Planning District Commission. A consulting firm was hired to develop a Conceptual Greenway Plan for the Roanoke Valley involving elected officials, civic leaders and the general public.

The Greenway Commission, appointed by the four Valley governments, is an advisory body. Its responsibilities include: facilitate cooperation and coordination among jurisdictions in greenway planning and development; recommend funding sources for greenway construction; develop uniform standards for design and construction; and, pursue public/private partnerships for greenway development.

The backbone of the Roanoke Valley greenway system is the Roanoke River which runs for over 20 miles through Roanoke County, Salem, Roanoke City and Vinton. In 1998 the Roanoke River Greenway Implementation Plan will be completed, focusing on that portion of the river in Salem and west Roanoke County.

In August 1997, the first one-half mile of greenway, through Garst Mill Park, was completed and opened. This was the first completed section of greenway in Roanoke County and is being very heavily used.

Construction will begin in 1998 on the Hanging Rock Battlefield Trail which travels through portions of Salem and Roanoke County. Also in 1998, construction is scheduled to begin on the Wolf Creek Greenway in the Town of Vinton. This trail will connect to the new bicycle lanes to be built on Hardy Road and the existing trail system in Goode and Stonebridge Parks in Roanoke County.

While a significant amount of progress has been made on greenways over the last 2 or 3 years there are substantial steps still to be taken.

ROANOKE RIVER

History and Location

The Roanoke River springs from the Jefferson National Forest in Virginia's western mountain highlands, and flows east through Montgomery, Roanoke, Bedford and Franklin Counties, the Cities of Salem and Roanoke and the Town of Vinton, to Smith Mountain Lake and beyond to the Atlantic Ocean. The heart of the Roanoke River corridor is an ageless, fertile valley, a scenic mountain bowl carved between the parallel ridges of the Allegheny and Blue Ridge Mountains, The river cuts perpendicular across two major, north-south routes in the region: I-81 and the Blue Ridge Parkway.

The mainstem of the Roanoke River is formed by the confluence of the North and South Forks. The North Fork drains a portion of the Ridge and Valley physiographic province, while the South Fork drains the western face of the Blue Ridge. The two forks converge at Lafayette, a short distance west of the Roanoke County line. The mainstem continues on through a narrow, steep-

walled valley near Glenvar. It then traverses the main valley, picking up many short and steep tributaries as it passes through the cities of Salem and Roanoke. The river follows the western

slope of the Blue Ridge to Mill Mountain, where it turns east and enters the Roanoke Gap, a gorge that it cut as the ridge was rising. Once through the Blue Ridge, the river enters the rolling Piedmont province, where it has been impounded to form Smith Mountain Lake.

The mountainous nature of the river headwaters tends to increase the severity of storms and the speed of runoff, making the river subject to flash floods. The sill formed by the Blue Ridge creates a natural settling basin above the gorge, in downtown Roanoke. The natural constriction of the river is exacerbated by manmade structures such as bridges and rail embankments, as well as by floodplain development along the river's course through the main Roanoke Valley. One result is frequent and extensive flood damage.

On the other hand, the mountainous terrain contributes to the river's scenic and recreational value, and also has positive effects on the river as an aquatic habitat. The cool, well-oxygenated water harbors an unusually wide variety of aquatic life, including trout and the Roanoke logperch, which is listed by the U.S. Fish and Wildlife Service as an endangered species. Riparian vegetation and woodlands help to keep water temperatures down and provide a habitat corridor that allows wildlife to move through the urbanized Roanoke Valley.

The river has also provided a corridor for human movement, which has been an important factor in both the prehistory and history of the Roanoke Valley. Native peoples moved up and down the Great Valley, but also settled at the rich meadows above the mouth of the Roanoke Gorge. Pioneer settlers used this water gap as a route from the Virginia tidewater to the Great Valley and beyond. The railroads followed in the 19th Century, giving Roanoke its main industry for many years. As a result, the river corridor is as rich in prehistoric and historic resources as it is in environmental resources.

Roanoke River Corridor Study

The Roanoke metropolitan area, the largest in Virginia west of the "urban crescent" from Washington through Richmond to Tidewater, is also the only major concentration of people and industry in the State to lie so close to the headwaters of a major river. It is the only population center of consequence to be found in the mountainous region west of the Blue Ridge. This location results in a set of environmental, aesthetic, and land use factors unique to the area.

The importance of the river and the urgent need for information on it led to the Roanoke River Corridor Study in 1990. This study included the length of the Roanoke River from its headwater tributaries in Montgomery and Roanoke Counties to the Hardy Ford Bridge, at the upper reaches of Smith Mountain Lake. Participants included the jurisdictions of Bedford, Franklin, Montgomery and Roanoke Counties, the Town of Vinton, and the Cities of Roanoke and Salem. Also included were the Central Virginia, Fifth, New River Valley and West Piedmont planning district commissions.

The study's goals were to produce a report documenting existing conditions in the Roanoke River corridor and to recommend ways in which identified problems, opportunities, and protection needs could be addressed. The final report contains detailed recommendations for policy implementation by the local governments.

One important element of the final report is a model Roanoke River Conservation Overlay Zone ordinance. This model ordinance provides a "shell" for each participating jurisdiction to use in developing an ordinance that is specific to the needs, challenges, opportunities and constraints of their jurisdiction. To date, only Roanoke County has adopted this ordinance and incorporated appropriate language into the comprehensive plan.

SOILS

In 1989 a soil survey was conducted in Roanoke County that contains information that can be used in land-planning programs in the County. The soil survey contains predictions of soil behavior for selected land uses such as agriculture, woodland management, recreation and development. The survey also highlights limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

In doing this survey, soil scientists observed the steepness, length, and shape of slopes; the general pattern of drainage; the kinds of crops and native plants growing on the soils; and the kinds of bedrock. The soils in the survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate and natural vegetation of the area. Each kind of soil is associated with a particular kind of landscape or with a segment of the landscape. By observing the soils in the survey area and relating their position to specific segments of the landscape, a soil scientist develops a model of how the soils were formed. During mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil at a specific location on the landscape.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit.

More specific information on the soils of Roanoke County can be obtained from the Soil Survey of Roanoke County and the Cities of Roanoke and Salem, Virginia published by the National Cooperative Soil Survey and issued in July 1997.

HISTORIC RESOURCES

Overview

Settlement began in Roanoke County in the mid-18th century, with the first immigration into the Great Valley of Virginia. The earliest settlers were Scots-Irish who came south along the Great Wagon Road, through the Shenandoah Valley and into the Roanoke River Valley. The earliest settlements naturally occurred in the northern areas, including Catawba and the Botetourt Springs/Hollins area. Germans began to settle in Roanoke County in increasing numbers, particularly in the last two decades of the 18th century.

By 1838, Roanoke County was established, with the growing town of Salem as its county seat. Roanoke County had its roots as an agrarian economy, dominated by wheat and later tobacco cultivation and their related industries, milling and tobacco processing. In 1852, the Virginia and Tennessee Railroad completed tracks through Salem and, two years later, to Bristol improving access to eastern markets. By the 1880's, Roanoke had become a major transportation hub for several railroads, particularly when Norfolk and Western Railroad established Roanoke as the major office of its Virginia operations. Between 1880 and 1900, the County and the Cities of Roanoke and Salem experienced rapid growth and urbanization. In the twentieth century, the agricultural base has declined with the increased urban growth of Roanoke and Salem, particularly since 1950. Today, the Roanoke area is the regional center for industry and commerce in southwest Virginia.

Historical Architecture Reconnaissance Survey

Roanoke County residents have long been interested in the history of their community. In the 1980's, two new histories were written about the County and its architecture. In 1982, W.L. Whitwell, Professor of Art at Hollins College and Lee W. Winborne, a resident of Roanoke, prepared one of the first architectural studies of Roanoke County. Titled The Architectural Heritage of the Roanoke Valley, this book surveys the architecture of the County and the Cities of Roanoke and Salem, ranging from agricultural buildings to city storefronts. With the County's 150 year celebration of its founding, the Roanoke County Sesquicentennial Committee commissioned Deedie Kagey to write a history of Roanoke County, from its first settlement to the future. This volume, entitled When Past is Prologue: A History of Roanoke County, published in 1988, provided a valuable and complete history of the County.

Roanoke County's historic preservation efforts were boosted by the establishment of two important organizations in Roanoke: the Roanoke Regional Preservation Office and the Roanoke Valley Preservation Foundation. In 1990, in conjunction with these two organizations, Roanoke County undertook an architectural survey of its historic properties. The information gathered in this survey allows the objective evaluation of the significance of the County properties and provides preservation priorities to update the comprehensive plan.

The Roanoke County survey recorded a total of 410 structures. Of these, 379 historic sites were surveyed at the reconnaissance level and 31 at the intensive level. The most common building

type documented in the survey area is the single-family dwelling. Roanoke County's domestic architecture is predominantly rural and vernacular, reflecting its traditional agrarian culture character. The County survey did not identify any resources dating to the 18th century. Even in the earlier settled area of the Catawba Valley, no 18th century structures have yet been found.

Eleven homes were identified as potential recommendations to the National Register. In addition, the areas of Janee Drive, Hollins College, Bonsack and Wabun were identified as potential historic districts.

One of the important objectives of this survey was to promote civic pride in our community and to promote heritage education. One of the first steps in educating the public about the historic resources in Roanoke County is to let them know that they exist. It is important to inform the owners of such properties that their buildings are historic and therefore a valuable part of the County's history. It is also important to inform the general public of the existence of these historic structures and areas. These objectives could be achieved through the distribution of the survey forms to the property owners and the development of a historic tour brochure. The creation of a permanent Roanoke County Historic Resources Commission to deal with preservation issues would further help to protect the historic resources in the County.

MOUNTAINS AND RIDGETOPS

Introduction

The mountainsides and ridgetops that surround Roanoke County have always served as a source of great beauty, community pride and cultural heritage to those who call this area home. The mountains that form the bowl around the Valley below make this area unique - very few places can claim the scenic beauty of this region.

The mountains are not only beautiful to look at. They provide a valuable tool in the economic development tool box whether it be courting a new industrial prospect, being selected as the site of a major sports event or drawing in outdoor enthusiasts and tourists from around the world. The Roanoke Valley is able to offer something unique and different from anywhere else in the United States and that can be attributed to the scenic beauty of the region - the mountains, the forests, the Blue Ridge Parkway and the Appalachian Trail. How many communities can boost that they have both a National Park and a National Scenic Trail within their boundaries?

As our county prospers and grows and developable land is consumed it becomes increasingly important to implement strategies to preserve and protect these mountains and ridgetops. Careful and prudent planning must be conducted.

Mountain and Ridgetop Development Policies

For the most part, our suburban-oriented subdivision and zoning regulations assume that projects are built on relatively flat terrain. When these regulations are applied to projects built on

mountainsides and ridgetops they result in denuded hillsides, erosion, siltation of streams, flooding and the loss of scenic quality. Mountains and ridgetop development policies can help alleviate these unpleasant results and serve the following purposes: 1) Minimize soil instability, erosion and downstream siltation; 2) Minimize flooding; 3) Promote safety of the design and construction of development; 4) Protect rare and critical environments, such as acquifers and

recharge areas, wildlife, fragile soils and geologic structures; 5) Provide for safe vehicular access; and, 6) Preserve the scenic character of mountainsides.

There are various options for mountains and ridgetop development policies ranging from identifying and preserving steep slopes that should not be developed to adapting the density of development to the terrain so that as slope increases, allowed density decreases. In addition, various design guidelines should be evaluated to minimize land disturbance, encourage retention of existing vegetation and appropriate architecture that blends with the natural surroundings. Another option is to provide legal and financial mechanisms for the acquisition of open space and conservation easements in these areas.

AGRICULTURAL RESOURCES

The characteristics of the rural areas of Roanoke County have changed significantly over the last three decades, a trend that can be seen across the State. Farming has decreased from about 47,000 acres to less than 20,000 acres since 1969. The number of farms existing in the County in 1997 had dropped to half of what it was in 1969. Another noteworthy trend is that increasingly smaller part-time farms dominate agriculture in Roanoke County. Only two dairy farms and a few orchards remain. The bulk of farming is truck (vegetable) farming, cattle and hay. In almost all cases these operations are supplemented by at least one and often two outside incomes. The major farm and land owners are aging and retiring, placing them on fixed incomes in a climate of rising real estate taxes. Frequently there is no expectation that the next generation will continue farming.

The climate for forestry is similar. Forest resources are diminishing and land ownership is becoming more fragmented. This has discouraged some logging and forestry related industries and services from operating in the County.

The process by which agricultural land becomes suburban land tends to be incremental and characterized by subtle changes. The actual breaking of ground is only the conclusion of this conversion process. The principal factors that drive this farmland conversion process include: 1) the local economic viability of agriculture; 2) the loss of the critical mass of agricultural land within an area necessary to support agricultural services and markets; 3) public investment decisions for road improvements and sewer and water system construction; 4) the strength of local growth pressures and the resulting difference in land values for agricultural use and for development; and, 5) the circumstances, lifestyle preferences, and life cycles of farm families.

Suburban residents in Roanoke County are increasingly drawn to the attractions of pastoral landscapes and rural lifestyles. At first, they built "farmettes" on parcels of 5 to 20 acres serviced by private wells and septic systems. Eventually, denser development followed and the community now closely replicates the suburbs from which the newcomers fled. Continuing subdivision development will tend to drive land prices higher, making it more difficult and expensive to maintain enough land to support viable agricultural operations. Conflict is and will continue to be created between the farmers and the new residents over the smells, noise, use of fertilizers and other attributes of agriculture.

Given the nature and realities of these trends, should the County take proactive steps to preserve and protect the remaining agricultural and forestry resources? Despite these trends, there is a strong desire on the part of rural residents to maintain the rural environment, the rural life style and the rural quality of life that they have enjoyed and to preserve these things so that future generations can also enjoy them. In a broader sense, the existence of rural areas, working farms, pastoral views and open space enhance the quality of life of all residents of the Roanoke Valley. Farming is an important and critical link to our agrarian heritage and culture and provides educational opportunities for adults and children alike.

If agricultural resources have value to the community, then planning strategies and preservation techniques must be pursued that will allow farming to survive and remain financially feasible under changing economic and market trends. The challenge entering the next century will lie in community and citizen-based efforts to develop balanced, equitable and widely supported approaches to preserve the rural and agricultural areas of the County.

THE BLUE RIDGE PARKWAY

Introduction

Although the concept of parkways had been around since the mid-19th century, the Blue Ridge Parkway was one of the first rural parkways to be conceived. Its original purpose was simply to link two national parks - the Shenandoah in Virginia to the north and the Great Smokey Mountains in Tennessee and North Carolina to the south - a distance of over 469 miles. The new roadway was seen by many as an economic stimulus to the struggling southern Appalachia region and economy. The Parkway was initiated as a means of alleviating unemployment and promoting tourism. The construction of the Parkway also served as a reclamation project since much of the land along the Parkway's route was in poor condition from excess timbering operations and poor farming practices.

Construction of the Blue Ridge Parkway began in 1935 and the final section of the Parkway, at Grandfather Mountain, was not completed until 1987. For most of its length it follows the Blue Ridge of the southern Appalachian Mountains in Virginia and North Carolina. Elevation along the Parkway ranges from 649 feet above sea level to 6,053 feet above sea level.

Design of the Parkway

Although the general layout of the Parkway route had been established - a fairly direct linkage along the Blue Ridge Mountains connecting the Shenandoah National Park to the Great Smokey Mountain National Park - the design and construction route still had to be decided. In 1934 the designers of the Blue Ridge Parkway assembled in Roanoke, Virginia and established several principles to help define the themes and provide the context for the Parkway's design. Throughout the 52 year life of the design and construction of the Parkway, these original unifying design themes have been closely followed: 1) The Parkway would pass through a wide right-of-way averaging about 100 acres per mile. This would allow for the restoration and preservation of the roadside landscape; 2) All structures, such as bridges, tunnels, park buildings, signs and site details would be characterized by a rustic simplicity so that the Parkway would harmonize with the natural and cultural environments; 3) All design elements would relate to each other in a way that provides the "complete road"; and, 4) At intervals, the linear parkway right-of-way would bulge, creating recreational parks and scenic protection.

The Blue Ridge Parkway in Roanoke County

The Blue Ridge Parkway travels for 469 miles through two states, 29 counties, three national forests and an Indian reservation. The Parkway descends from the Peaks of Otter and for nearly 27 miles travels through Roanoke County. Roanoke has the distinction of being the most urban, metropolitan stop along this motor route.

As a long, linear national park the Blue Ridge Parkway shares its boundaries with a large number of adjoining properties. The Parkway has been described as a narrow ribbon laid upon the land. As such, many of the beautiful views, pastoral scenes and vernacular landscapes observed while driving the Parkway are private lands and not protected by national park status or scenic easement. As Roanoke County continues to grow and develop, the challenge is to protect the scenic qualities of the Blue Ridge Parkway while respecting private landowners' rights to use their land. This balance can be achieved through the use of careful design guidelines and incentives to encourage sensitive site planning.

Blue Ridge Parkway Overlay District

A proposed Blue Ridge Parkway Overlay District may be one means to protect the important viewshed aspects of this resource. The National Park Service in conjunction with County staff has mapped and prioritized the significant viewsheds from the Parkway. These viewsheds are identified on the future land use maps in Chapter 7. This information could form the basis of a Blue Ridge Parkway Overlay District. Such a district would maintain the development regulations of the underlying zoning district while providing additional design guidelines and development flexibility to protect these viewsheds. This overlay district could include density bonuses to encourage cluster development outside of the viewshed areas, more stringent limitations on height of structures and more flexibility in landscaping requirements.

THE APPALACHIAN NATIONAL SCENIC TRAIL

Introduction

The Appalachian Trail (A.T.) is a 2,160 mile long public footpath traversing the spine of the Appalachian Mountains from central Maine to northern Georgia. First conceived in the early 1920s by Benton MacKaye, the A.T. was completed in 1937 largely due to the efforts of local volunteer organizations. The trail links 75 public parks and forests including 26 federally designated wilderness areas.

The A.T. is the most ecologically diverse unit of the National Park system. With inventories complete on 85% of the corridor, there have been 1472 recorded occurrences of sensitive, rare, threatened or endangered species at 402 separate sites.

Utilized by three to four million hikers annually, the trail offers everything from an afternoon's stroll to a six month through hike. The A.T. is within a days drive of two thirds of the population of the United States.

Perhaps as remarkable as the physical public resource is the system that built and maintains the trail for future generations. Locally based volunteer organizations perform the lions share of the work needed to build and maintain the footpath, overnight shelters, parking areas, bridges, and the environmental and cultural resources that are integral to the Appalachian Trail experience. Their partnership with state and federal agencies and local governments is perhaps the longest lasting, strongest and most complex public/private partnership in the nation. It has served as a model for similar arrangements across the country.

The Appalachian Trail in Roanoke County

Some of the most spectacular sections of the entire Appalachian Trail and two of its most well used destination points are found along the 17.8 miles of the trail found in Roanoke County. The trail enters the county just north and west of the famed McAfee's Knob. This dramatic outcrop of Silurian sandstone provides a 270 degree view from the pastoral Catawba Valley to the City of Roanoke. It is arguably the most photographed point on the Appalachian Trail. The trail follows Catawba Mountain, crosses the Catawba Valley rural historic district, crosses Sandstone Ridge, and ascends Cove Mountain to the popular Dragon's Tooth outcrops. Following the crest of Cove Mountain above Millers Cove, the trail leaves the county but continues to view areas within the county. The trail re-enters the county at the crest of Brush Mountain and follows along the county line, passing the Audie Murphy monument, then dropping into the Sinking Creek Valley. The trail sections from Rt. 311 to McAfee's Knob and the day-use trail to Dragon's Tooth are among the most heavily used and best loved sections of the A.T. in the entire region.

The entire trail section through the county is well known for remote rugged ridgetops that overlook some of the most beautiful and unspoiled pastoral landscapes on the A.T. The Andy Layne/North Mountain trail system runs from Scorched Earth Gap on Catawba Mountain to Lost Spectacles Gap on Cove Mountain to complete a popular 28.7 mile loop trail with the A.T., almost entirely within the county.

Two trail shelters are located within the county on Catawba Mountain. Trailhead parking lots are located on Rt.311 at the crest of Catawba Mountain, at the foot of North Mountain and on the

crest of Brush Mountain west of the Audie Murphy Monument.

The Appalachian Trail Overlay District
All of the actual footpath of the A.T. and most of the foreground viewshed within the county is in federal ownership. The trail and associated lands are primarily managed by the Roanoke Appalachian Trail Club, a non-profit volunteer organization founded in 1932, and the Appalachian Trail Conference, a trail-wide private umbrella organization with local offices in Newport, Virginia. Trail lands east of the Virginia Route 624 crossing are under the jurisdiction of the National Park Service's Appalachian Trail Park Office and lands west of that crossing are a part of the Jefferson National Forest.

A proposed Appalachian Trail Overlay District is one means of protecting the important viewsheds associated with the trail experience in the county. The County staff, in conjunction with the Appalachian Trail Conference and Roanoke Appalachian Trail Club, and with the assistance of the U.S. Forest Service and National Park Service, are in the process of mapping the significant viewsheds from the trail. This information could form the basis of an Appalachian Trail Overlay District. Such a district would maintain the development regulations of the underlying zoning district while providing additional design guidelines and development flexibility to protect these viewsheds. This overlay district could include density bonuses to encourage cluster development outside of the viewshed areas, more stringent limitations on height of structures and more flexibility in landscaping requirements.

Goal

To preserve and manage the natural, historic and scenic resources of Roanoke County in a way that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.

Issues and Opportunities

- Roanoke County citizens place a high value on the surrounding mountain landscape, agricultural and forested lands, streams, rivers, open spaces and parks.

- Although rapidly urbanizing, the County still has large rural areas where little development has occurred and limited environmental degradation has taken place.

- The County is a member of the regional Greenway Commission. While actively involved in planning and constructing an integrated greenway system, the County has not prepared a detailed feasibility study for all of the primary off-road greenways proposed in the County.

- The County participates in the regional land trust through membership on the Board of Trustees and financial support. The land trust is a regional publicly-supported charitable organization providing voluntary means to promote the preservation of natural and cultural resources.

- The County participates in the regional open space planning project initiated by the Fifth Planning District.

- The County has adopted the Roanoke River Overlay District as part of the zoning ordinance. This provides a moderate level of environmental protection to this significant water resource.

- The County zoning ordinance is not an effective mechanism for protection of the natural landscape and environment. It does not prevent or even discourage development on mountainsides and ridgetops and has no tools in place for the protection of streams, wetlands and other natural features.
- Given the large land base of the County and the amount of construction activity occurring, the County requires additional monitoring and enforcement resources directed towards the control and prevention of soil erosion.

- Over the last decade, Roanoke County has seen moderate to strong residential development pressures. As more and more of the relatively flat and close-in land has been developed the economic feasibility of building on the mountainsides and ridgetops had grown.

- The County allows filling and construction in floodplain areas**.** Although this conforms to Federal Government minimum standards, it constrains stormwater drainage and may create a flooding hazard downstream.

- The zoning ordinance does not require nor effectively encourage open space or greenways in new subdivisions.

- VDOT road standards provide for the efficient and safe movement of traffic but do not allow or encourage innovation or creativity in subdivision design.

- The County subdivision ordinance needs to be updated and modified to reflect the policies and guidelines of this Community Plan.

- The County has developed a regional stormwater management plan but this plan does not emphasize the use of open space or greenways as a cost effective, non-engineering tool.

- The County does not restrict or monitor development in wetlands. The County depends on the Army Corps of Engineers for this but there is no “alert” mechanism in place. The system relies on the diligence of citizens to protect wetlands.

- Natural stream channels are allowed to be diverted or covered by development. Although unavoidable in a few specific instances, it does permanently alter the natural environment

and aesthic amenity of that water course.

- The County does not have a mechanism in place to control or manage the removal and destruction of trees on private properties.

- The County participates in the land use valuation program. This program allows land owners to reduce real estate taxes on land that is set aside in agricultural, forestry or horticultural uses.

- The County has not implemented the "Recommendations for Planning" produced as a result of the historic architectural survey of 1991-92.

- The scenic viewsheds of the Blue Ridge Parkway and Appalachian Trail are under a continuous threat from development, including broadcast towers.

- Active farm and orchard land in Roanoke County are diminishing rapidly.

Objectives

A. Require land use management policies that preserve the natural, scenic and historic environment while accommodating future growth and development.

B. Protect the Blue Ridge Parkway, Appalachian Trail and other scenic corridors through Roanoke County.

C. Protect critical mountainsides and ridgetops.

D. Protect soils, aquatic life and water quality by reducing runoff and soil erosion.

E. Reduce flooding and flood damage by protecting floodplains and wetlands.

F. Encourage land use patterns that conserve and protect open space thereby providing wildlife habitat and recreational opportunities.

G. Promote the use of a liveable traffic design model that values neighborhood appearance and pedestrian friendly aspects of a neighborhood street as much as the ease of traffic movements.

H. Encourage innovation and creativity in site design and, where appropriate, greenways, parks and open space in new subdivisions.

I. Provide incentives for the protection of forested areas on private lands.

J. Increase participation in the land use valuation program.

K. Increase awareness of our historic, cultural and heritage resources.

L. Encourage design that respects the natural environment and reflects the local environment.

M. Encourage the implementation of the Conceptual Greenway Plan.

Implementation Strategies

1. Conduct extensive public education, with assistance from the Urban Forestry Council, Valley Beautiful and local, regional and statewide land trusts, on tree preservation and protection. Coordinate this effort with VDOT, AEP, Roanoke Gas, other utilities and the Roanoke Regional Home Builders Association. (Obj. C, D, I)

2. Adopt a tree ordinance to protect, preserve and/or replace trees on private property during land development. (Obj. C, D, I)

3. Develop a county-wide "conservation and development" resource map utilizing the GIS system. Include such features as wetlands, floodplains, steep slopes, historic sites, viewsheds, habitats of endangered or threatened species and significant woodlands. (Obj. B, C, D, E)

4. Adopt a Natural Resources Overlay District to include resources such as mountainsides and ridgelines, properties within the critical viewsheds of the Blue Ridge Parkway and the Appalachian Trail, and lands that include wetlands and floodplains. Within this overlay district "conservation site design" will be mandatory allowing full density with clustering and open space requirements. (Obj. A, B, C, E, F, H, L)

5. Incorporate "conservation site design" as a by right option in all agricultural and residential zoning districts. This design technique provides a straightforward way to ensure that new subdivisions are designed around the central organizing principle of conservation. It requires the developer to identify conservation and development areas on the site and locate houses, streets and lots in a way that protects these resource features while allowing clustering and full-density. (Obj. A, C, E, F, H, L)

6. Identify mountainsides and ridgetops that should be protected and develop preservation strategies for these resources. (Obj. C)

7. Adopt policies for the siting of broadcast towers. (Obj. A, B, C, L)

8. Incorporate the design and development of the greenway system into the regional stormwater management plan. (Obj. E, H, M)

9. Allocate a percentage of any future stormwater management utility fees to the development of greenways. (Obj. E, H, M)

10. Revise parking lot standards to reflect actual usage, not anticipated “worse case” usage. Encourage shared parking where feasible. (Obj. D)

11. Develop educational brochures that outline voluntary means to preserve and protect open space, forest and agricultural lands, mountainsides and ridgetops and historic resources. (Obj. B, C, D, E, J, K)

12. Adopt stormwater management techniques, such as grassy swales, that are both effective on-site control measures and aesthetically pleasing. (Obj. D, L)

13. Ensure the long-term protection of the Spring Hollow Reservoir and adjacent public lands. Study the effectiveness of various conservation strategies such as conservation easements, zoning ordinance overlay districts or other mechanisms. (Obj. A, C, D, F)

14. Revise the subdivision ordinance to reflect the policies and guidelines of this Community Plan. Encourage the donation of greenway easements when property that is included on the Roanoke County Conceptual Greenway Plan is subdivided. (Obj. F, H, M)

15. Distribute the historic resources survey forms to property owners and assist in the creation of a permanent Roanoke County Historic Resources Commission. (Obj. K)

16. Develop subdivision street standards that value salable communities, retail and pedestrian-friendly streets, and a distinctive product equally with ease of traffic movement. Consider private road systems and standards. (Obj. G, L)

17. Identify important gateways and develop gateway overlay districts to preserve scenic entrances to and views of our community. (Obj. A, B, K)

18. Work with representatives of the billboard industry to optimize the location of billboards in Roanoke County. (Obj. A, K, L)

19. Utilize the Virginia Department of Game and Inland Fisheries fish and wildlife resources and habitat’s information system. (Obj. D, F)

20. Prioritize the open space resources in Roanoke County and develop a long-term strategy to preserve, protect and manage these critical resources. (Obj. A, B, C, D, E, F, I K, M)

21. Prepare a detailed feasibility study, as described in the Conceptual Plan, for the primary off-road greenways proposed in the County. (Obj. M)

22. Study, identify and recommend dedicated sources of funding for the County greenway system. (Obj. M)

23. Encourage the use of best management practices in the watersheds of Spring Hollow and Carvin's Cove Reservoirs. (Obj. D, E)

24. Enhance existing regulations and enforcement procedures to reduce soil runoff and erosion and provide for the protection of soils, aquatic life and water quality. (Obj. D, E)